Release notes for ENDF/B Development n-054_Xe_128 evaluation

April 26, 2017

- **checkr** Warnings:

  1. A previous error halted parsing of the current section
     MAT=5437, MF= 1, MT=451 (1): Parsing stopped

     ```
     ERROR(S) FOUND IN MAT=5437, MF= 1, MT=451
         SECTION CANNOT BE CHECKED FROM SEQUENCE NUMBER     256 TO     328
     ```

- **checkr** Errors:

  1. A variable is outside the allowed ENDF range
     MAT=5437, MF= 1, MT=451 (0): Variable range

     ```
     ERROR(S) FOUND IN MAT=5437, MF= 1, MT=451
         MOD =    1 OUT OF RANGE    0 -    0          RECORD NUMBER    256
     ```

  2. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=5437, MF= 2, MT=151 (0): Directory (b)

     ```
     ERROR(S) FOUND IN MAT=5437, MF= 2, MT=151
         SECTION  2/151 NOT IN DIRECTORY               RECORD NUMBER    330
     ```

  3. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=5437, MF= 3, MT= 1 (0): Directory (b)

     ```
     ERROR(S) FOUND IN MAT=5437, MF= 3, MT=  1
         SECTION  3/  1 NOT IN DIRECTORY               RECORD NUMBER    447
     ```

  4. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=5437, MF= 3, MT= 2 (0): Directory (b)

     ```
     ERROR(S) FOUND IN MAT=5437, MF= 3, MT=  2
         SECTION  3/  2 NOT IN DIRECTORY               RECORD NUMBER    476
     ```

  5. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=5437, MF= 3, MT= 4 (0): Directory (b)

     ```
     ERROR(S) FOUND IN MAT=5437, MF= 3, MT=  4
         SECTION  3/  4 NOT IN DIRECTORY               RECORD NUMBER    505
     ```

  6. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=5437, MF= 3, MT= 16 (0): Directory (b)

     ```
     ERROR(S) FOUND IN MAT=5437, MF= 3, MT= 16
         SECTION  3/ 16 NOT IN DIRECTORY               RECORD NUMBER    525
     ```

  7. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=5437, MF= 3, MT= 17 (0): Directory (b)

1

```
ERROR(S) FOUND IN MAT=5437, MF= 3, MT= 17
    SECTION  3/ 17 NOT IN DIRECTORY                RECORD NUMBER     535
```

8. Missing a section in directory so your directory is messed up. This error will break everything else
   MAT=5437, MF= 3, MT= 22 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=5437, MF= 3, MT= 22
    SECTION  3/ 22 NOT IN DIRECTORY                RECORD NUMBER     541
```

9. Missing a section in directory so your directory is messed up. This error will break everything else
   MAT=5437, MF= 3, MT= 28 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=5437, MF= 3, MT= 28
    SECTION  3/ 28 NOT IN DIRECTORY                RECORD NUMBER     555
```

10. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5437, MF= 3, MT= 51 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=5437, MF= 3, MT= 51
    SECTION  3/ 51 NOT IN DIRECTORY                RECORD NUMBER     566
```

11. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5437, MF= 3, MT= 52 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=5437, MF= 3, MT= 52
    SECTION  3/ 52 NOT IN DIRECTORY                RECORD NUMBER     586
```

12. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5437, MF= 3, MT= 53 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=5437, MF= 3, MT= 53
    SECTION  3/ 53 NOT IN DIRECTORY                RECORD NUMBER     604
```

13. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5437, MF= 3, MT= 54 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=5437, MF= 3, MT= 54
    SECTION  3/ 54 NOT IN DIRECTORY                RECORD NUMBER     622
```

14. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5437, MF= 3, MT= 55 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=5437, MF= 3, MT= 55
    SECTION  3/ 55 NOT IN DIRECTORY                RECORD NUMBER     639
```

15. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5437, MF= 3, MT= 56 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=5437, MF= 3, MT= 56
           SECTION  3/ 56 NOT IN DIRECTORY                    RECORD NUMBER    655
```

16. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5437, MF= 3, MT= 57 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=5437, MF= 3, MT= 57
           SECTION  3/ 57 NOT IN DIRECTORY                    RECORD NUMBER    671
```

17. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5437, MF= 3, MT= 58 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=5437, MF= 3, MT= 58
           SECTION  3/ 58 NOT IN DIRECTORY                    RECORD NUMBER    686
```

18. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5437, MF= 3, MT= 59 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=5437, MF= 3, MT= 59
           SECTION  3/ 59 NOT IN DIRECTORY                    RECORD NUMBER    701
```

19. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5437, MF= 3, MT= 60 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=5437, MF= 3, MT= 60
           SECTION  3/ 60 NOT IN DIRECTORY                    RECORD NUMBER    715
```

20. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5437, MF= 3, MT= 61 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=5437, MF= 3, MT= 61
           SECTION  3/ 61 NOT IN DIRECTORY                    RECORD NUMBER    729
```

21. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5437, MF= 3, MT= 62 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=5437, MF= 3, MT= 62
           SECTION  3/ 62 NOT IN DIRECTORY                    RECORD NUMBER    743
```

22. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5437, MF= 3, MT= 63 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=5437, MF= 3, MT= 63
           SECTION  3/ 63 NOT IN DIRECTORY                    RECORD NUMBER    756
```

23. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5437, MF= 3, MT= 64 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=5437, MF= 3, MT= 64
            SECTION  3/ 64 NOT IN DIRECTORY                RECORD NUMBER    769
```

24. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5437, MF= 3, MT= 65 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=5437, MF= 3, MT= 65
            SECTION  3/ 65 NOT IN DIRECTORY                RECORD NUMBER    782
```

25. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5437, MF= 3, MT= 66 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=5437, MF= 3, MT= 66
            SECTION  3/ 66 NOT IN DIRECTORY                RECORD NUMBER    794
```

26. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5437, MF= 3, MT= 67 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=5437, MF= 3, MT= 67
            SECTION  3/ 67 NOT IN DIRECTORY                RECORD NUMBER    806
```

27. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5437, MF= 3, MT= 68 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=5437, MF= 3, MT= 68
            SECTION  3/ 68 NOT IN DIRECTORY                RECORD NUMBER    818
```

28. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5437, MF= 3, MT= 69 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=5437, MF= 3, MT= 69
            SECTION  3/ 69 NOT IN DIRECTORY                RECORD NUMBER    829
```

29. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5437, MF= 3, MT= 70 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=5437, MF= 3, MT= 70
            SECTION  3/ 70 NOT IN DIRECTORY                RECORD NUMBER    840
```

30. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5437, MF= 3, MT= 71 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=5437, MF= 3, MT= 71
            SECTION  3/ 71 NOT IN DIRECTORY                RECORD NUMBER    851
```

31. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5437, MF= 3, MT= 72 (0): Directory (b)

4

```
        ERROR(S) FOUND IN MAT=5437, MF= 3, MT= 72
          SECTION  3/ 72 NOT IN DIRECTORY                RECORD NUMBER     861
```

32. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5437, MF= 3, MT= 73 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=5437, MF= 3, MT= 73
          SECTION  3/ 73 NOT IN DIRECTORY                RECORD NUMBER     871
```

33. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5437, MF= 3, MT= 91 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=5437, MF= 3, MT= 91
          SECTION  3/ 91 NOT IN DIRECTORY                RECORD NUMBER     881
```

34. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5437, MF= 3, MT=102 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=5437, MF= 3, MT=102
          SECTION  3/102 NOT IN DIRECTORY                RECORD NUMBER     890
```

35. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5437, MF= 3, MT=103 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=5437, MF= 3, MT=103
          SECTION  3/103 NOT IN DIRECTORY                RECORD NUMBER     915
```

36. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5437, MF= 3, MT=104 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=5437, MF= 3, MT=104
          SECTION  3/104 NOT IN DIRECTORY                RECORD NUMBER     930
```

37. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5437, MF= 3, MT=105 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=5437, MF= 3, MT=105
          SECTION  3/105 NOT IN DIRECTORY                RECORD NUMBER     943
```

38. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5437, MF= 3, MT=107 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=5437, MF= 3, MT=107
          SECTION  3/107 NOT IN DIRECTORY                RECORD NUMBER     953
```

39. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5437, MF= 4, MT= 2 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=5437, MF= 4, MT=  2
    SECTION  4/  2 NOT IN DIRECTORY              RECORD NUMBER     970
```

40. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5437, MF= 4, MT= 16 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=5437, MF= 4, MT= 16
    SECTION  4/ 16 NOT IN DIRECTORY              RECORD NUMBER    1184
```

41. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5437, MF= 4, MT= 17 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=5437, MF= 4, MT= 17
    SECTION  4/ 17 NOT IN DIRECTORY              RECORD NUMBER    1195
```

42. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5437, MF= 4, MT= 22 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=5437, MF= 4, MT= 22
    SECTION  4/ 22 NOT IN DIRECTORY              RECORD NUMBER    1206
```

43. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5437, MF= 4, MT= 28 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=5437, MF= 4, MT= 28
    SECTION  4/ 28 NOT IN DIRECTORY              RECORD NUMBER    1217
```

44. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5437, MF= 4, MT= 51 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=5437, MF= 4, MT= 51
    SECTION  4/ 51 NOT IN DIRECTORY              RECORD NUMBER    1228
```

45. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5437, MF= 4, MT= 52 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=5437, MF= 4, MT= 52
    SECTION  4/ 52 NOT IN DIRECTORY              RECORD NUMBER    1256
```

46. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5437, MF= 4, MT= 53 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=5437, MF= 4, MT= 53
    SECTION  4/ 53 NOT IN DIRECTORY              RECORD NUMBER    1283
```

47. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5437, MF= 4, MT= 54 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=5437, MF= 4, MT= 54
         SECTION  4/ 54 NOT IN DIRECTORY                 RECORD NUMBER    1307
```

48. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5437, MF= 4, MT= 55 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=5437, MF= 4, MT= 55
         SECTION  4/ 55 NOT IN DIRECTORY                 RECORD NUMBER    1331
```

49. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5437, MF= 4, MT= 56 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=5437, MF= 4, MT= 56
         SECTION  4/ 56 NOT IN DIRECTORY                 RECORD NUMBER    1355
```

50. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5437, MF= 4, MT= 57 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=5437, MF= 4, MT= 57
         SECTION  4/ 57 NOT IN DIRECTORY                 RECORD NUMBER    1379
```

51. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5437, MF= 4, MT= 58 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=5437, MF= 4, MT= 58
         SECTION  4/ 58 NOT IN DIRECTORY                 RECORD NUMBER    1403
```

52. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5437, MF= 4, MT= 59 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=5437, MF= 4, MT= 59
         SECTION  4/ 59 NOT IN DIRECTORY                 RECORD NUMBER    1427
```

53. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5437, MF= 4, MT= 60 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=5437, MF= 4, MT= 60
         SECTION  4/ 60 NOT IN DIRECTORY                 RECORD NUMBER    1451
```

54. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5437, MF= 4, MT= 61 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=5437, MF= 4, MT= 61
         SECTION  4/ 61 NOT IN DIRECTORY                 RECORD NUMBER    1475
```

55. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5437, MF= 4, MT= 62 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=5437, MF= 4, MT= 62
         SECTION  4/ 62 NOT IN DIRECTORY                    RECORD NUMBER    1499
```

56. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5437, MF= 4, MT= 63 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=5437, MF= 4, MT= 63
         SECTION  4/ 63 NOT IN DIRECTORY                    RECORD NUMBER    1522
```

57. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5437, MF= 4, MT= 64 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=5437, MF= 4, MT= 64
         SECTION  4/ 64 NOT IN DIRECTORY                    RECORD NUMBER    1545
```

58. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5437, MF= 4, MT= 65 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=5437, MF= 4, MT= 65
         SECTION  4/ 65 NOT IN DIRECTORY                    RECORD NUMBER    1569
```

59. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5437, MF= 4, MT= 66 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=5437, MF= 4, MT= 66
         SECTION  4/ 66 NOT IN DIRECTORY                    RECORD NUMBER    1593
```

60. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5437, MF= 4, MT= 67 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=5437, MF= 4, MT= 67
         SECTION  4/ 67 NOT IN DIRECTORY                    RECORD NUMBER    1617
```

61. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5437, MF= 4, MT= 68 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=5437, MF= 4, MT= 68
         SECTION  4/ 68 NOT IN DIRECTORY                    RECORD NUMBER    1640
```

62. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5437, MF= 4, MT= 69 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=5437, MF= 4, MT= 69
         SECTION  4/ 69 NOT IN DIRECTORY                    RECORD NUMBER    1664
```

63. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5437, MF= 4, MT= 70 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=5437, MF= 4, MT= 70
         SECTION  4/ 70 NOT IN DIRECTORY              RECORD NUMBER    1688
```

64. Missing a section in directory so your directory is messed up. This error will break everything else
    $MAT=5437, MF= 4, MT= 71 (0): Directory (b)$

```
      ERROR(S) FOUND IN MAT=5437, MF= 4, MT= 71
         SECTION  4/ 71 NOT IN DIRECTORY              RECORD NUMBER    1712
```

65. Missing a section in directory so your directory is messed up. This error will break everything else
    $MAT=5437, MF= 4, MT= 72 (0): Directory (b)$

```
      ERROR(S) FOUND IN MAT=5437, MF= 4, MT= 72
         SECTION  4/ 72 NOT IN DIRECTORY              RECORD NUMBER    1735
```

66. Missing a section in directory so your directory is messed up. This error will break everything else
    $MAT=5437, MF= 4, MT= 73 (0): Directory (b)$

```
      ERROR(S) FOUND IN MAT=5437, MF= 4, MT= 73
         SECTION  4/ 73 NOT IN DIRECTORY              RECORD NUMBER    1759
```

67. Missing a section in directory so your directory is messed up. This error will break everything else
    $MAT=5437, MF= 4, MT= 91 (0): Directory (b)$

```
      ERROR(S) FOUND IN MAT=5437, MF= 4, MT= 91
         SECTION  4/ 91 NOT IN DIRECTORY              RECORD NUMBER    1783
```

68. Missing a section in directory so your directory is messed up. This error will break everything else
    $MAT=5437, MF= 5, MT= 16 (0): Directory (b)$

```
      ERROR(S) FOUND IN MAT=5437, MF= 5, MT= 16
         SECTION  5/ 16 NOT IN DIRECTORY              RECORD NUMBER    1808
```

69. Missing a section in directory so your directory is messed up. This error will break everything else
    $MAT=5437, MF= 5, MT= 17 (0): Directory (b)$

```
      ERROR(S) FOUND IN MAT=5437, MF= 5, MT= 17
         SECTION  5/ 17 NOT IN DIRECTORY              RECORD NUMBER    1866
```

70. Missing a section in directory so your directory is messed up. This error will break everything else
    $MAT=5437, MF= 5, MT= 22 (0): Directory (b)$

```
      ERROR(S) FOUND IN MAT=5437, MF= 5, MT= 22
         SECTION  5/ 22 NOT IN DIRECTORY              RECORD NUMBER    1889
```

71. Missing a section in directory so your directory is messed up. This error will break everything else
    $MAT=5437, MF= 5, MT= 28 (0): Directory (b)$

9

```
        ERROR(S) FOUND IN MAT=5437, MF= 5, MT= 28
            SECTION  5/ 28 NOT IN DIRECTORY                RECORD NUMBER    2098
```

72. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5437, MF= 5, MT= 91 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=5437, MF= 5, MT= 91
            SECTION  5/ 91 NOT IN DIRECTORY                RECORD NUMBER    2208
```

- `groupie` Errors:

  1. Very small elastic cross section found
     0: Small elastic

     ```
     Multi-Group and Multi-Band Parameters from ENDF/B Data (GROUPIE 2015-2)
     ----------------------------------------------------------------------
     ENDF/B Input and Output Data Filenames
     ENDFB.IN
     ENDFB.OUT
     ... [97 more lines]
     ```

- `fudge-4.0` Warnings:

  1. Missing a channel with a particular angular momenta combination
     resonances / resolved / MultiLevel_BreitWigner (Error # 0): missingResonanceChannel

     ```
     WARNING: Missing a channel with angular momenta combination L = 0, J = 1.5 and S = 1.5 for "capture"
     ```

  2. Potential scattering hasn't converged, you need more L's!
     resonances / resolved (Error # 1): potentialScatteringNotConverged

     ```
     WARNING: Potential scattering hasn't converged by L=0 at E=3500.0 eV, xs[0]/xs[0]=100.0% > 0.1%
     ```

  3. Cross section does not match sum of linked reaction cross sections
     crossSectionSum label 0: total (Error # 0): CS Sum.

     ```
     WARNING: Cross section does not match sum of linked reaction cross sections! Max diff: 0.38%
     ```

  4. Cross section does not match sum of linked reaction cross sections
     crossSectionSum label 1: (z,n) (Error # 0): CS Sum.

     ```
     WARNING: Cross section does not match sum of linked reaction cross sections! Max diff: 0.10%
     ```

- `fudge-4.0` Errors:

  1. Calculated and tabulated Q values disagree.
     reaction label 25: n[multiplicity:'2'] + Xe127 (Error # 0): Q mismatch

     ```
     WARNING: Calculated and tabulated Q-values disagree: -10342064.71844482 eV vs -9621290. eV!
     ```

  2. Calculated and tabulated Q values disagree.
     reaction label 26: n[multiplicity:'3'] + Xe126 (Error # 0): Q mismatch

     ```
     WARNING: Calculated and tabulated Q-values disagree: -17565639.66220093 eV vs -1.68514e7 eV!
     ```

3. Calculated and tabulated Q values disagree.
   reaction label 27: n + H1 + I127 (Error # 0): Q mismatch

   ```
   WARNING: Calculated and tabulated Q-values disagree: -8897386.689529419 eV vs -8174830. eV!
   ```

4. Calculated and tabulated Q values disagree.
   reaction label 28: Xe129 + gamma (Error # 0): Q mismatch

   ```
   WARNING: Calculated and tabulated Q-values disagree: 6177162.005737305 eV vs 6907690. eV!
   ```

5. Calculated and tabulated Q values disagree.
   reaction label 29: n + He4 + Te124 (Error # 0): Q mismatch

   ```
   WARNING: Calculated and tabulated Q-values disagree: -2491909.265823364 eV vs -1.7648e6 eV!
   ```

6. Calculated and tabulated Q values disagree.
   reaction label 30: H1 + I128_s (Error # 0): Q mismatch

   ```
   WARNING: Calculated and tabulated Q-values disagree: -2071255.105316162 eV vs -1344730. eV!
   ```

7. Calculated and tabulated Q values disagree.
   reaction label 31: H2 + I127_s (Error # 0): Q mismatch

   ```
   WARNING: Calculated and tabulated Q-values disagree: -6672820.588592529 eV vs -5864710. eV!
   ```

8. Calculated and tabulated Q values disagree.
   reaction label 32: H3 + I126_s (Error # 0): Q mismatch

   ```
   WARNING: Calculated and tabulated Q-values disagree: -9559494.390716553 eV vs -8824660. eV!
   ```

9. Calculated and tabulated Q values disagree.
   reaction label 33: He4 + Te125_s (Error # 0): Q mismatch

   ```
   WARNING: Calculated and tabulated Q-values disagree: 4077061.962356567 eV vs 4.812e6 eV!
   ```

- `njoy2012` Warnings:

  1. With the advent of the ENDF-6 format, it is possible to make evaluations that fully describe all the products of a nuclear reaction. Some carry-over evaluations from earlier ENDF/B versions also have this capability, but many do not. This message is intended to goad evaluators to improve things!
     groupr...compute self-shielded group-averaged cross-sections (0): GROUPR/conver (0)

     ```
     ---message from conver---cannot do complete particle production for mt= 16
                            only mf4/mf5 provided
     ```

  2. With the advent of the ENDF-6 format, it is possible to make evaluations that fully describe all the products of a nuclear reaction. Some carry-over evaluations from earlier ENDF/B versions also have this capability, but many do not. This message is intended to goad evaluators to improve things!
     groupr...compute self-shielded group-averaged cross-sections (1): GROUPR/conver (0)

     ```
     ---message from conver---cannot do complete particle production for mt= 17
                            only mf4/mf5 provided
     ```

3. With the advent of the ENDF-6 format, it is possible to make evaluations that fully describe all the products of a nuclear reaction. Some carry-over evaluations from earlier ENDF/B versions also have this capability, but many do not. This message is intended to goad evaluators to improve things!
   groupr...compute self-shielded group-averaged cross-sections (2): GROUPR/conver (0)

   ```
    ---message from conver---cannot do complete particle production for mt= 22
                             only mf4/mf5 provided
   ```

4. With the advent of the ENDF-6 format, it is possible to make evaluations that fully describe all the products of a nuclear reaction. Some carry-over evaluations from earlier ENDF/B versions also have this capability, but many do not. This message is intended to goad evaluators to improve things!
   groupr...compute self-shielded group-averaged cross-sections (3): GROUPR/conver (0)

   ```
    ---message from conver---cannot do complete particle production for mt= 28
                             only mf4/mf5 provided
   ```

5. With the advent of the ENDF-6 format, it is possible to make evaluations that fully describe all the products of a nuclear reaction. Some carry-over evaluations from earlier ENDF/B versions also have this capability, but many do not. This message is intended to goad evaluators to improve things!
   groupr...compute self-shielded group-averaged cross-sections (4): GROUPR/conver (0)

   ```
    ---message from conver---cannot do complete particle production for mt= 91
                             only mf4/mf5 provided
   ```

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